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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/471,497	12/23/1999	ISAO MIHARA	0039-7495-2S	7481

22850   7590   08/16/2005

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EXAMINER
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ART UNIT	PAPER NUMBER
2623	

DATE MAILED: 08/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO 90C (Rev 10/03)

		Application No.	Applicant(s)
Advisory Action ***Before the Filing of an Appeal Brief***		09/471,497	MIHARA ET AL.
		Examiner	Art Unit	
		Anand Bhatnagar	2623	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED <u>07/25/05</u> FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

    a) ☒ The period for reply expires <u>5</u> months from the mailing date of the final rejection.

    b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

      Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

<u>NOTICE OF APPEAL</u>

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

<u>AMENDMENTS</u>

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will <u>not</u> be entered because

    (a)☐ They raise new issues that would require further consideration and/or search (see NOTE below);

    (b)☐ They raise the issue of new matter (see NOTE below);

    (c)☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

    (d)☐ They present additional claims without canceling a corresponding number of finally rejected claims.

      NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5. ☐ Applicant's reply has overcome the following rejection(s): _____.

6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

    The status of the claim(s) is (or will be) as follows:

    Claim(s) allowed: _____.

    Claim(s) objected to: _____.

    Claim(s) rejected: _____.

    Claim(s) withdrawn from consideration: _____.

<u>AFFIDAVIT OR OTHER EVIDENCE</u>

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will <u>not</u> be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will <u>not</u> be entered because the affidavit or other evidence failed to overcome <u>all</u> rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

<u>REQUEST FOR RECONSIDERATION/OTHER</u>

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
    <u>See Continuation Sheet.</u>

12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____

13. ☐ Other: _____.

Continuation of 11. does NOT place the application in condition for allowance because: Applicant argues, regarding claims 1, 9, and 27, that the processes in deforming a range image and/or the processes of applicant's instant invention is different than the deformation and/or the processes of the prior art of Masuda et al. ("A robust method for registration and segmentation of multiple range images," Masuda, T.; Yokoya, N.; CAD-Based Vision Workshop, 1994., IEEE, Proceedings of the 1994 Second , 8-11 Feb. 1994 Pages:106 - 113). Examiner agrees that the deformation and/or the processes are different but applicant does not state in the claim limitations what is the specific deformation and/or the processes taking place in applicant's instant invention. The limitations of these claims in essence state to deform a range image and/or generate/obtain a three dimensionally deformed range image without specifying the the type of deformation taking place. Also applicants representative, on top of page three in the remarks, states in applicant's instant invention "one of two range images is deformed using a known deformation parameter and the deformed image is compared with the other of the range images." These features stated by applicant's representative is, first of all, nowhere in the claim limitations and, secondly, is incorrect since applicant compares a deformed range image with a current range image in the claims but nowhere does he compare a deformed range image "with the other of the range images," i.e. more than one range image. Examiner does not read specifics of the deformation process and/or the processes in applicant's specifications into the claim language. Applicant's representative, on page 2 second paragraph, argues that Masuda does not teach or suggest "recognizing three dimensional motion of the object in the range image by comparing the deformed image with a newly captured range image obtained by capturing the object currently. Masuda discloses, page 107 section 3, to transform/deform the first range image by adding in motion parameters, obtained from the two range images, to the first range image and obtaining a transformed range image, i.e. read as deforming the first range image in 3D since the range image is 3D information, and then comparing this transformed range image with the second range image, i.e. current range image. From the comparison of the two range images results in residue which is the motion of the object in the images. In examiner's last office action examiner showed the limitation of real time which was taught by the prior art of Hiura et al. ("Real-time object tracking by rotating range sensor," Hiura, S.; Yamaguchi, A.; Sato, K.; Inokuchi, S.; Pattern Recognition, 1996., IEEE, Proceedings of the 13th International Conference on , Volume: 1 , 25-29 Aug. 1996 Pages:825 - 829 vol.1).. Hiura et al., in the abstract, teaches to perform this process in real time on the range images to obtain the motion of an object. If this is performed in real time than all the range images are current. This combination as believed by the examiner meets applicant's limitations. Further on page 3 applicant argues that Masuda does not indicate any deformation and does not teach "generating a three dimensional deformed image by three dimensionally deforming the range image.". Examiner disagrees. As stated above Masuda discloses to transform the first range image with motion parameters, i.e read as deforming the range image since the first range image parameters are now changed, resulting in a transformed range image, i.e. read as generating a three dimensional deformed image by three dimensionally deforming the range image since the range images are all in 3D. Regarding claims 31,34, and 37 applicant argues that these claims are allowable since they depend from claims 1, 9 and 27, which applicant representative believes to be allowable because Szeliski "does not describe the claimed image recorition method of generating range images, giving a deformation parameter to one of the range images, computing a deformed image and comparing a deformed image with the other of the range images." First of all this limitation is not anywhere in the claim language, nowhere in the claim limiattions state that there is "giving of a deformation parameter" nor there is "comparing a deformed image with the other of the range images." There is a deformation of an image taking place in the claims but nowhere does it state a deformation parameter is given. Also there is a comparison of a deformed image with that of a current image in the claim limitation but there is no comparison of a deformed image with the other of the range images, i.e. more than one range image. Therefore this argument is moot. Also examiner believes that the limitations of claims 1, 9, and 27 of applicant's instant invention are believed to be met by Masuda et al. and Hiura et al. The last argument made by aplicant's representative , regarding claims 39, 41, and 43 is that the prior art of Sato et al. ("Recovering shape and reflectance properties from a sequence of range and color images," Sato, Y.; Ikeuchi, K.; Multisensor Fusion and Integration for Intelligent Systems, 1996. IEEE/SICE/RSJ International Conference on , 8-11 Dec. 1996 Pages:493 – 500) does not use reflection for the purpose for generating the 3D model and does not teach generating range images based on the reflectance of the light from the object. Examiner disagrees. First of all the argument made by the aplicant is not correct in stating that "range images" are generated because the claims state that a "range image" is generated not more than one range image. Secondly, the prior art of Sato et al. teaches obtain/capture/generate 3D range images of an object that is illuminated (Sato et al.; Abstract, fig. 1, and section 2.1). As shown in fig. 1 color images of an illuminated object are taken with a range finder being used to take the images, this use of the range finder results in the images being obtained as 3D range images since the distance is being determined by the range finder. This system, as stated in the abstract, as well as most other camera systems is capturing images of iluminated object(s). The images obtained/generated from thypes of camera system are the captured reflectance of the illumination of the object and not the direct illumination, i.e. the colors in the image of the object are the reflectances of the illumination. The colors in the image are intensity patterns/distributions of the reflected light off of objects, i.e. spatial intensity distribution. If an object did not reflect any light then a camera system such as this would result in no image of the object(s).

SAMIR AHMED
PRIMARY EXAMINER